

FORM NO. 51-AAA
FEB 1952

CENTRAL INTELLIGENCE AGENCY

CLASSIFICATION

~~SECRET~~
SECURITY INFORMATION

50X1-HUM

INFORMATION REPORT

REPORT

CD NO.

COUNTRY USSR (Moscow and Leningrad Oblasts)/Germany (SovZone) DATE DISTR. 28 October 1952

SUBJECT Television Development at NII 160 in Fryazino, NII 380 in Leningrad, and in the Soviet Zone of Germany NO. OF PAGES 5

DATE OF INFO.

NO. OF ENCLS. 2 (of 3 pages)
(LISTED BELOW)

PLACE ACQUIRED

SUPPLEMENT TO REPORT NO.

50X1-HUM

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES, WITHIN THE MEANING OF TITLE 18, SECTIONS 793 AND 794, OF THE U.S. CODE, AS AMENDED. ITS TRANSMISSION OR REVELATION OF ITS CONTENTS TO OR RECEIPT BY AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. THE REPRODUCTION OF THIS FORM IS PROHIBITED.

* Not graded
THIS IS UNEVALUATED INFORMATION

50X1-HUM

1. From January 1941 to July 1943 [redacted] in the H F Laboratory of Fernseh GmbH in Berlin, Zehlendorf, Goertz Allee. [redacted] 50X1-HUM

There were about 250 men employed at the plant, which was engaged in producing senders and receivers (wave length of about 70 cm) for the Reichs Post. In July 1943 the plant was moved to Tannwald, Czechoslovakia. Sometime before the end of the war, Dr. Rols Mueller took half of everything in the plant and moved to Taufkirchen in Bayern. This was to prevent total destruction in case of bombing. The group that remained at Tannwald was under the direction of Dr. Schubert. He was later carried away by the Soviets and [redacted] has not been heard of since. 50X1-HUM

2. The Czechs seized the plant in May 1945 but at the end of the war, July 1945, the Soviets took over everything at Tannwald. All men between 18 and 65 years of age were ordered away. Everything in the plant was well packed, crated, and shipped to Moscow. [redacted]

[redacted] The machinery had been badly handled in transport and much of it was in poor condition upon arrival. 50X1-HUM

CLASSIFICATION

~~SECRET~~

STATE	<input checked="" type="checkbox"/>	NAVY	<input checked="" type="checkbox"/>	NSRB		DISTRIBUTION									
ARMY	<input checked="" type="checkbox"/>	AIR	<input checked="" type="checkbox"/>	FBI		SI/P&E	Ev	ATTIC	<input checked="" type="checkbox"/>						

SECRET

-2-

However, with the help of 30 Russians, of which 3 were engineers and 5 technicians, [redacted] set up a plant in an old institute consisting of 12 or 15 empty rooms.

50X1-HUM

[redacted] The plant produced and tested all parts for the Moscow TV sender, and was known as SKB833 (Special Construction Bureau). The technical director was Fedorov, an engineer but by no means an expert, who got his job through family connections.

3.

Dr Legler

[redacted] did the theoretical and design work

50X1-HUM

[redacted] up to 20 technically trained Russians in the plant. These had little initiative and imagination. They did learn quickly to imitate, copy, and follow instructions. [redacted] difficulty with them was "turn over"--as soon as a man became fairly well acquainted with his job he would be transferred to some other plant. [redacted] division worked on: 1) frequency meters (Range 0.1 to 20 mega Hz in three stages), 2) frequency curve tracer, 1 e, cathode ray trace on a fluorescent screen, 3) amplifiers for the Moscow TV sender. [redacted] built only the first pattern or model. The production was carried out somewhere else. [redacted] had a monthly plan but no quota. TV reception from Moscow - airline 50 km - was reasonably good. [redacted] made no experiments with color TV.

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

4. There was no lack of materials. [redacted] brought practically everything [redacted] from Tannwald. [redacted] astonished at the number of instruments, switches, tubes, and automatic machines in the USSR which had come from [redacted] The Russians were able to copy these with good success. The use of parts containing Russian iron usually resulted in poor and uncertain results. Russian iron gradually improved and [redacted] it was satisfactory for use in radio parts.

50X1-HUM

50X1-HUM

5. The plant [redacted] a short distance out of Moscow. Everything was managed by the director of the plant. [redacted]

50X1-HUM

50X1-HUM

prices were extremely high and there was little to be bought. The Russians stole everything, from trinkets to TV picture tubes. These could then be bought on the market. [redacted]

[redacted] A new regulation went into effect late in 1946 [redacted] pay as a development engineer was increased from 880 to 2500 Rubles per month.

50X1-HUM

6. In the spring of 1948, [redacted] Germans from the SKB-Moscow were sent to Leningrad, where a new TV laboratory and sender was to be built. It was said that secret work ([redacted] magnetron research) was to be started at the Moscow plant. Living conditions were much better in Leningrad. [redacted]

50X1-HUM

50X1-HUM

[redacted] A German school was provided for the German children. (Russian history was always taught, however.) The common Russian people were appreciative and kind

50X1-HUM

50X1-HUM

SECRET

SECRET

-3-

[redacted]

No radio reception was forbidden. Short wave (17 m, 19 m, 25 m) bands came in clearly from Germany [redacted] came in well but certain programs were "jammed". Middle wave lengths (200-500 m) could be heard only in winter.

50X1-HUM

7. The Leningrad laboratory was located at the north east edge of the city on Lesnoy Prospekt (spelling of Russian name; means Wald or Forest Street). It was on the side of the city [redacted] A building - roughly 100 rooms, two stories and a basement - previously used as a factory, was remodeled for the new laboratory. All [redacted] equipment was brought from Moscow and added to the [redacted] German apparatus already in the laboratory. [redacted] instruments and supplies were copied and improved. The personnel consisted of [redacted] Germans [redacted] from Fryasino, USSR, [redacted] from Arnstadt, Germany (SovZone), [redacted] from Thalheim - Zwoenitz, Germany (SovZone), and about 500 Russians.

50X1-HUM

50X1-HUM

50X1-HUM

Officially the laboratory was under the direction of the Russians, but Johann Guenther was the technical leader, and H. Zschau was the chief of the optical department. As before, Dr Legler made the drawings and computations for the measuring instrument section.

50X1-HUM

8. [redacted] the frequency recorder (Frequenz-range covered 1.0 to 20 mega Hz in 3 stages of 8 mega Hz each. Each scale division corresponded to 1 Hz. [redacted] recorders with ranges: 20 - 50 mega Hz, 50 - 150 mega Hz, and 150 - 300 mega Hz. The frequency 64 - 83 mega Hz, which is the Russian TV sender frequency, gave [redacted] trouble. These meters were to be used as constant frequency standards as well as for test and control. After 10 - 15 instruments of each type had been built in the laboratory, further production work was done elsewhere.

50X1-HUM

50X1-HUM

50X1-HUM

Other departments worked on improvements for the Moscow sender. Experimental work on color TV was initiated by the Germans.

50X1-HUM

9. There was never any lack of raw materials such as copper, iron, or electron tubes. The latter were often [redacted] copies of the following: 6AG7, 6AT7, 6SA7, 6J5, 6NS7, 6SK7, 6J6, and 6AG5. At first the copies were shortlived and unreliable, but their quality and performance improved as time went on. All the tubes [redacted] were made by Oberspreewerke. Satisfactory lacquers, good insulators, and transformer iron were hard to obtain. It was generally believed by the men in the laboratory that the TV sender in Berlin was dismantled, shipped to Leningrad, and rebuilt there. The Moscow sender was developed and built new from the ground up. In addition to the laboratory mentioned above, there was another research and development laboratory in the city of Leningrad. The Germans were gradually transferred to the laboratory in the city. [redacted] the military was taking over the laboratory north of the city.

50X1-HUM

50X1-HUM

50X1-HUM

10.

SECRET

50X1-HUM

50X1-HUM

[redacted] the TV development group at Adlershof Barracks, Berlin. There were about 20 engineers and technicians in the development laboratory and the same number in the production division. The buildings were new and well equipped. Augustine, a German, was in charge of the building. [redacted] Kurt Heiss was the general supervisor of all senders in DDR. He was a Russian who traveled back and forth to Moscow frequently. [redacted]

50X1-HUM

50X1-HUM

Herman Stier was the general director of the laboratory. The production group was under the direction of Werner Hoffman. Hasz was in charge of high vacuum development work. This work with broadcast development is considered very secret and has been moved to a new building near Ostkreuz Bahnhof. Maurer is the iconoscope specialist.

11. Other sections of the development laboratory were:

- (a) Control and measuring instruments, including power supply and wiring

50X1-HUM

- (b) Low frequency receivers

50X1-HUM

- (c) High frequency research

Director Sohr

- (d) Synchronization

- (e) Camera development and testing

Director Werner Hoffman

- (f) Optics

Director Linder

- (g) Construction

- (h) Amplifiers (2 men)

- (i) Signal (2 men)

12. A total of about 50 men worked in the experimental laboratory.

50X1-HUM

[redacted] The laboratory was called Zentral Laboratorium der Generalintendanz, Berlin-Adlersdorf, Rudower Chaussee 116. There seemed to be ample funds for all work. The equipment was adequate and good. The laboratory was guarded by a fence and dogs.

50X1-HUM

SECRET

Women served as guards and admission was by pass only. The sender at Adlershof beamed its programs by short wave (less than 1 meter) to the city hall (Stadthaus) where it was broadcast. One sideband was used. Pictures were broadcast on 99.9 mega Hz and tone on 106.4 mega Hz. The band width was 6.5 mega Hz. For scanning, 625 lines were used. Output at the city hall was 150 watts. Poor tubes accounted for the low power. The oscillator had been built by Zwaenitz, a Soviet factory in the Erzgebirge. It had to be rebuilt before it would operate satisfactorily. This same company also supplied parts for the Leningrad sender. Receivers were built in Radeberg by Sachsenwerke. The cabinets are large (roughly 1 m x .8 m x .5 m); the picture screen is about 18 x 18 cm. Tubes are still poor and not completely reliable.

50X1-HUM

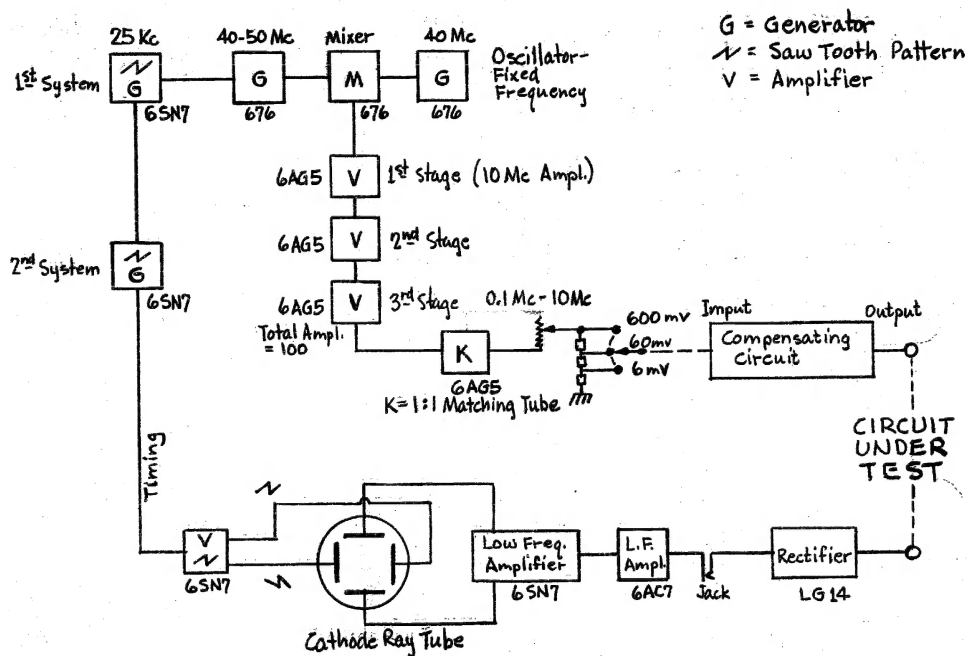
ENCLOSURE (B): Circuit of "Frequenzschreiber"

SECRET

Page Denied

Next 1 Page(s) In Document Denied

-SECRET-



CIRCUIT OF "FREQUENZSCHREIBER"

SECRET-SECURITY INFORMATION

Attachment B

50X1-HUM